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ABSTRACT

This document briefly introduces and describes the administration of the Elementary School Economics (ESE) program, discusses program objectives, suggests ways to integrate ESE into social studies curriculum, and evaluates the program's effectiveness. In 1960 the Industrial Relations Center at the University of Chicago initiated the ESE program to study student comprehension of basic economic concepts and integration of economics into elementary school social studies programs. Designed to develop fourth and fifth graders' understandings of processes of consumption and production, ESE offers 11 units, requires 20 to 34 teaching hours, and includes a teacher's guide, instructional aids, evaluation materials, student readings, a project book, and progress checks. Program evaluation involved student understanding and interest, teacher evaluation, and parent reaction. Over one thousand elementary students were tested and equated for mean and range of IQs, socioeconomic status, age, and grade in school, and they were divided into experimental and control groups. The ESE program was given to the experimental group. The control group was given regular social studies course materials. The experimental group showed over 25% greater acquisition of economic understanding than the control. Ninety-three percent of the teachers evaluated ESE materials and the program as good or very good, 97% of parents interviewed felt that the program was helpful to their children, and a majority of the teachers surveyed indicated a student preference for ESE over other social studies programs. (AV)

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BACKGROUND AND EVALUATION of the ELEMENTARY SCHOOL ECONOMICS PROGRAM

William D. Rader, Director

SP009251

Industrial Relations Center

The University of Chicago

May, 1965

I. PROGRAM DEVELOPMENT AND FIELD-TESTING

The Elementary School Economics Program was initiated by the Industrial Relations Center in 1960 as an experimental research project, designed to obtain data relating to these questions: Can elementary school students comprehend, utilize, and retain basic economic concepts? Can a systematic program of economic education be related effectively to the elementary school social studies program?

The Industrial Relations Center

The Industrial Relations Center is affiliated with the Division of the Social Sciences and the Graduate School of Business of The University of Chicago. In its educational activities, the Center is working to develop a comprehensive approach geared to the needs of the four key secular institutions in the community: industry, schools, local government, and the hospitals and welfare agencies. With this end in view, it is preparing and field-testing programs of education and development covering some of the persistent problems faced by these four key institutions. Robert K. Burns, Professor in the Graduate School of Business and the Division of the Social Sciences, is Executive Officer of the Industrial Relations Center of The University of Chicago.

The Project Staff

The Elementary School Economics Program was developed by the Social Studies Project staff of the Industrial Relations Center: Robert Lee (project director 1960-63), William Rader, Frances Kyes, Susan Nesbitt, and Valerie Lynch

Objective tests for use with the program, a teacher evaluation form, and a parent questionnaire were prepared by George O. Baehr, Director of Program Evaluation at the Industrial Relations Center. Yale Brozen, Professor of Economics at The University of Chicago, served as Program Consultant.

Teaching Economics at the Elementary School Level

The first assumption underlying this program is that young people between the ages of 9 and 12 have daily economic experiences, such as buying and using goods and services; establishing bank accounts; and earning money in exchange for baby sitting, mowing lawns, and delivering newspapers. It is our belief that these experiences can be utilized effectively in the teaching of basic economic concepts.

Recognizing that children at the elementary school level are capable of learning many of the basic principles of economics, a group of outstanding

economists and educators--in the 1961 report of the National Task Force on Economic Education--recommended that economic understanding be emphasized at several points in the school curriculum.

> There are many opportunities for building economic understanding from the time the child enters first grade until he graduates from high school. Interesting experiments now under way suggest that such simple notions as division of labor, prices, exchange in markets, and even profit can be grasped by elementary school children if they are built into carefully planned teaching materials and methods. Inescapably, children are exposed to such ideas in their day-to-day lives. The elementary grades provide an opportunity to clarify them, and to relate them to daily problems of family living, especially in the social studies courses children take from the early grades. We commend these experiments and recommend adoption of these techniques in the earlier grades as this becomes feasible.*

The second assumption of this program is that economic education can be introduced progressively as the child matures instead of waiting until he reaches high school. When no basic model of the economic world has been constructed in the elementary school grades, teachers of succeeding grades have nothing to build on. The advantage of providing adequate instruction in economics at the elementary school level is that this provides a foundation for later instruction in economics.

A third assumption is that the teaching of economic principles will help to strengthen other social learnings at the elementary school level.

Guiding Principles

The principles which served as guide lines in the development of this program were:

Content. --All efforts are made to insure that the content of the program is correct, non-partisan, and comprehensive. Whenever necessary, information outside the area of economics, but within the field of the social studies, is introduced to make ideas clear, to assure meaningful learning, and to serve as a bridge to a more thorough understanding of economic ideas.

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*Economic Education in the Public Schools, A report of the National Task Force on Economic Education, 1961, pp. 70-71.

Structure.--An attempt is made to develop the materials in such a way that they can be used to provide students with a mental structure of the economic processes to be studied.

Learning Experiences. --The development of student activities and the preparation of materials for use by students are checked against the following criteria:

- Will this activity or exercise permit student practice of the behavior stated in the unit or topic objective?
- Is it justified in terms of the time needed to carry it out?
- Are the students involved in the activity realistically?
- Is it educationally significant?
- Does it build on what has gone before and prepare students for what is to come?

Continuity.--To maintain continuity of learning experiences throughout the program, the materials for each unit are logically related to the previous unit and build upon the ideas in all the earlier units.

Program Development Steps

-Survey Study and Analysis	(August-September, 1960)
-Planning Stage (Objectives, Content, Methods)	(October, 1960)
-Program Development (Pilot Version)	(November, 1960-Sept., 1961)
-Field-Testing of Pilot Program (2 School Systems)	(September, 1961-May, 1962)
-Initial Revision	(June-September, 1962)
-Final Field-Testing (4 School Systems)	(September, 1962-May, 1963)
-Final Revision	(September, 1964)

Field-Testing the Program

The Elementary School Economics Program was field-tested in two school systems, under controlled conditions, during the 1961-1962 school year: Flint and Lansing, Michigan.

During the 1962-1963 school year, the program was field-tested in the school systems of Flint (Michigan), Lansing (Michigan), and Edina (Minnesota), and in the Avery Coonley School, a private school located in Downers Grove, Illinois.

II. PROGRAM OBJECTIVES AND ORGANIZATION

Objectives

1. To develop in elementary school students an understanding of two basic economic processes: consumption and production

2. To develop in elementary school students an understanding of the relationship between consumption and production

Grade	Economic Processes
Four	Consumption
Part I (Units 1-6)	
Five	Production
Part II (Units 7-11)	The Relationship Between Consumption and Production

Organization--Part I

Unit One presents the problem of economic scarcity at the national level. Unit Two deals with the concept of scarcity at the family level, and briefly highlights the parts of the economic process to be studied (consumption) and their relationships. Units Three, Four, and Five deal with the parts of the process and point out further relationships among them. In Unit Six, the parts of the process are combined and presented for the purposes of (1) showing the relationships among the parts and (2) developing a more thorough and comprehensive understanding of the over-all process of consumption.

OUTLINE -- PART I

Objective: To develop in students an understanding of how Americans obtain goods and services

	UNIT		UNIT OBJECTIVES
THE PROBLEM	ONE	SCARCITY--a UNIVERSAL PROBLEM	To develop in students an understanding of the problem of scarcity
	TWO	WANTS	To develop in students an understanding of (1) the priority of human wants, (2) the characteristics of human wants, (3) the reasons why people cannot satisfy all their wants, and (4) the reason why families must make choices about which wants to satisfy
HOW AMERICANS DEAL WITH THE PROBLEM	THREE	WORK	To develop in students an understanding of the relationship among wants, work, and money
	FOUR	MONEY	To develop in students an understanding of the (1) the evolution of our system of exchange and (2) the major functions of the money we use today
	FIVE	CONSUMPTION AND SAVINGS	To develop in students an understanding of (1) the importance of consumer choices and (2) why people save money
RELATIONSHIPS	SIX	SUMMARY	To develop in students an understanding of the relationships among wants, work, money, and consumption and savings

OUTLINE -- PART II

Objective: To develop in students an understanding of how Americans produce and obtain goods and services

UNIT		UNIT OBJECTIVES
SEVEN	HOW AMERICANS OBTAIN GOODS AND SERVICES	To develop in students an understanding of the process by which Americans obtain the goods and services they want
EIGHT	OVERVIEW	Understanding of the way in which Americans produce goods and services and market goods
NINE	PRODUCTION	Understanding of why people organize businesses Understanding of what is needed for the production of goods and services Understanding of the way in which labor, materials, and equipment are combined to produce goods and services
TEN	MARKETING	Understanding of the relationship of production, marketing, and consumption
ELEVEN	SUMMARY	Understanding of the way in which wants, work, money, consumption and savings, production, and marketing are related

ECONOMIC RELATIONSHIPS

THE PROBLEM OF SCARCITY

OUR WANTS FOR GOODS AND SERVICES ARE UNLIMITED

BUT

OUR PERSONAL RESOURCES (MONEY) ARE LIMITED

OUR PRODUCTIVE RESOURCES (LABOR, MATERIALS & EQUIPMENT) ARE LIMITED

THUS

SCARCE RESOURCES COMPEL MAN TO ECONOMIZE TO BETTER SATISFY HIS UNLIMITED WANTS

HOW AMERICANS DEAL WITH THE PROBLEM OF SCARCITY

People work in order to

Obtain goods and services

They receive money in exchange for producing goods and services

The money they receive is

Used to buy goods and services

&/or

Saved for future consumption

Produce goods and services

What is produced is determined largely by consumer preferences

Efficient production is determined by the effective combination of labor, materials, and equipment

Goods and services must be made available to consumers

THE MARKET

Demand for goods and services

Supply of goods and services

PRICE

Exchanging money for goods and services

Buying goods and services

Selling goods and services

III. INTRODUCING AND ADMINISTERING THE PROGRAM

In the past, the schools that have been most successful in using and incorporating the Elementary School Economics Program into their social studies curriculum have utilized a procedure for introducing the program similar to the steps listed below.

- Examination of program materials by superintendent, principals, curriculum director or curriculum committee, board members, and teachers.

- Teachers volunteer to teach the program.

- Establish pilot program in one or two elementary schools, e. g. 1 or 2 fourth-grade classes and 1 or 2 fifth-grade classes.

- Review social studies curriculum for grades Four and Five, and make adjustments to allow adequate time for teaching the ESE program. (See Section IV-p. 9 for time requirements.)

- Stimulate interest and enthusiasm among teachers and parents. Curriculum personnel and school administrators play a major role in helping to make a success of the program by indicating their interest in the program and helping to motivate teachers.

- Conduct a pre-program orientation meeting with teachers and principals to review the objectives, content, organization, and materials of the program.

- Determine principal's role-Discuss ways in which the principal will (1) be kept informed concerning program progress, (2) interpret the program to parents, and (3) contribute to the success of the program in other ways.

- Evaluate pilot program by means of (1) follow-up conference with teachers (half-way through the program) and (2) evaluation form and end-of-program meeting with teachers and principals.

IV. USING THE PROGRAM

In using the Elementary School Economics Program, it is suggested that the various units of the program be related, as much as possible, to the teaching of other elementary school social studies. Each teacher is urged to present the program in whatever manner and time sequence are most appropriate to the varying needs and interests of the students.

Estimated Time for Teaching the Program

The estimated amount of classroom time needed to teach the program ranges from 20 to 34 hours. The majority of teachers who have used the program have taught it as a separate subject. However, when possible, it should be related to the fourth-grade social studies curriculum.

Suggestions for Relating the Program to the Social Studies Curriculum

In the Spring of 1963, the staff of the Elementary School Economics Project surveyed the fourth-grade social studies curricula of 40 school systems. A brief summary of the survey results follows:

Geography and Way of Life in Different Regions of the World.--In 12 of the school systems, students learn that they are members of a world community. The subject matter includes a study of the climate, natural resources, industries, transportation and communication, culture and customs, government, recreation, and different ways of satisfying basic needs in each of the regions studied.

The State.--In seven of the school systems, students study their home state for the entire year. Subject matter typically includes a geographical overview, history of the state, units on natural resources, industries, transportation, communication, education, recreation, and government.

The Local Community.--In two of the school systems, students study their local community. The subject matter is similar to that found in the state studies.

The Nation.--In two of the school systems, students study the discovery, exploration, and struggle for independence of the United States. The emphasis is on the rugged quality of the explorers and pioneers, and on the reasons the colonies declared their independence.

Composite.--In 17 of the school systems, a combination of the above categories is studied.

Suggestions for Integrating the Elementary School Economics Program

ELEMENTARY SCHOOL ECONOMICS	FOURTH-GRADE SOCIAL STUDIES CURRICULUM		
UNITS	The Local Community and the Home State	The Nation	Type-Regions of the World
Unit I Scarcity--a Universal Problem	Conservation of natural resources	Conservation of natural resources	Every nation's problem
Unit II Wants		Wants vary throughout the nation. (Factors: geography, natural resources, climate)	(1) Food, clothing, and shelter--universal human wants (2) Wants vary in different regions. (Factors: geography, culture, natural resources, climate)
Unit III Work	Well-known products produced in community or state. (Factors: natural resources, work skills of people, transportation facilities)	Different types of work in different sections of U. S. (Factors: geography, climate, natural resources, transportation)	(1) Economic interdependence among workers of all nations (2) Regional occupations, i.e., in a farming, fishing, manufacturing, forest, or desert area
Unit IV Money	Early state history--forms of commodity money	Early U. S. history--barter Location of U. S. mints	Types of money used in different countries. Student coin collectors may have samples
Unit V Consumption and Savings			Universality of consuming goods and services to satisfy wants

Program Materials--Description and Use

The teacher's guide and other instructional materials are designed to serve as aids in presenting the Elementary School Economics Program. They present a comprehensive statement of the economic concepts to be taught, and are designed to be flexible in terms of teaching approach.

The teacher's materials for use in the program include: teacher's guides, instructional aids (charts), and evaluation materials (pre- and post-tests). The students' materials include: a book of students readings, a project book, and progress checks. The purpose of each type of material is stated below.

Teacher's guide. --The teacher's guide describes the major points to be covered, suggests several approaches for introducing the unit, and outlines several activities from which the teacher can choose in carrying out the objectives of the unit.

Instructional aids. --Three wall charts are included in Part I of the program. The wall charts are used to explain the over-all process that is being studied and to emphasize key concepts.

Evaluation materials. --The pre- and post-tests consist of two series of multiple-choice questions. The purpose of the pre-program test is to assess the students' level of economic understanding before they have been exposed to the program. The purpose of the post-program test is to assess the students' level of economic understanding after they have completed Part I of the program. A comparison of the pre-test scores with the post-test scores provides the teacher with a measure of the change in the students' level of economic understanding.

Students' readings. --The students' readings for Part I consists of a bound book titled Elementary School Economics I, Readings. This book contains several stories and essays which are coordinated with the subject matter of each unit. The reading materials were prepared by qualified economists and experienced teachers.

The students' readings can be used in several ways; they can be read by the students in class, assigned as outside readings, or used as the basis for discussion, and as an aid in carrying out classroom projects and activities related to the program.

Project Book. --The project book has a workbook format and contains one- and two-page materials, illustrated and in color. They are designed to enable students to practice the behavior stated in the unit or topic objective.

These materials, which have proven to be useful instructional aids, can also be used to convey basic ideas, to summarize content, and to serve as a basis for classroom discussion.

Progress checks. --The progress checks are self-scoring tests which are administered to students after the completion of the unit. Each progress check contains ten true-and-false questions. After taking the test, the student may break a sealed flap and read the correct answer. The purpose of the progress checks is to provide each student with an immediate assessment of how well he has understood the basic ideas presented in each unit.

A coordinated program. --All of the program materials are built around and coordinated with the teacher's guide. Each type of material is used for a specific purpose, and each helps to complement and to reinforce the ideas presented in the other materials. In this way, the program materials--which are a combination of print and several types of visual aids--are coordinated to provide the component parts of the educational process.

EVALUATION OF PROGRAM EFFECTIVENESS: GRADES 4 & 5

A. FOUR METHODS--of evaluating program effectiveness:

1. Student Understanding--of economic concepts
2. Student Interest in & Reaction--to an economics program
3. Teacher Evaluation--of the program & materials
4. Parent Reaction--to the program for their children

B. SCOPE--of field testing & evaluation

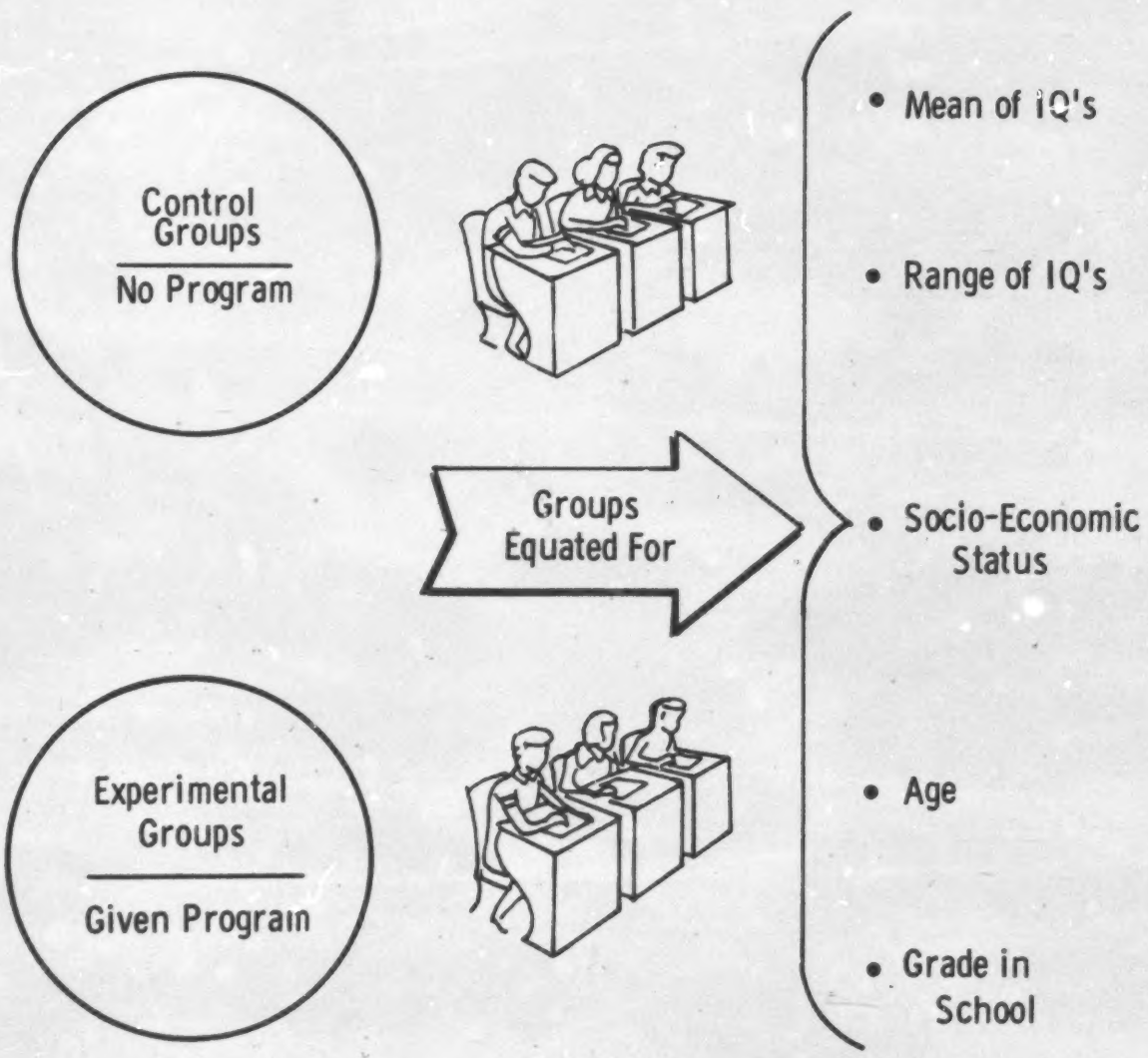
PUBLIC SCHOOL SYSTEMS	PART I - GRADE 4		PART II - GRADE 5		TOTAL
	No. of Classes	No. of Students	No. of Classes	No. of Students	Students Grades 4 - 5
Flint, Michigan	35	1,400	31	1,240	2,640
Lansing, Michigan			14	490	490
Edina, Minnesota	1	32	1	32	64
Hinsdale, Illinois			1	35	35
PRIVATE SCHOOL					
Avery Coonley School			1	25	25
Totals	36	1,432	48	1,822	3,254

84 Classes

RESEARCH DESIGN TO MEASURE PROGRAM EFFECTIVENESS

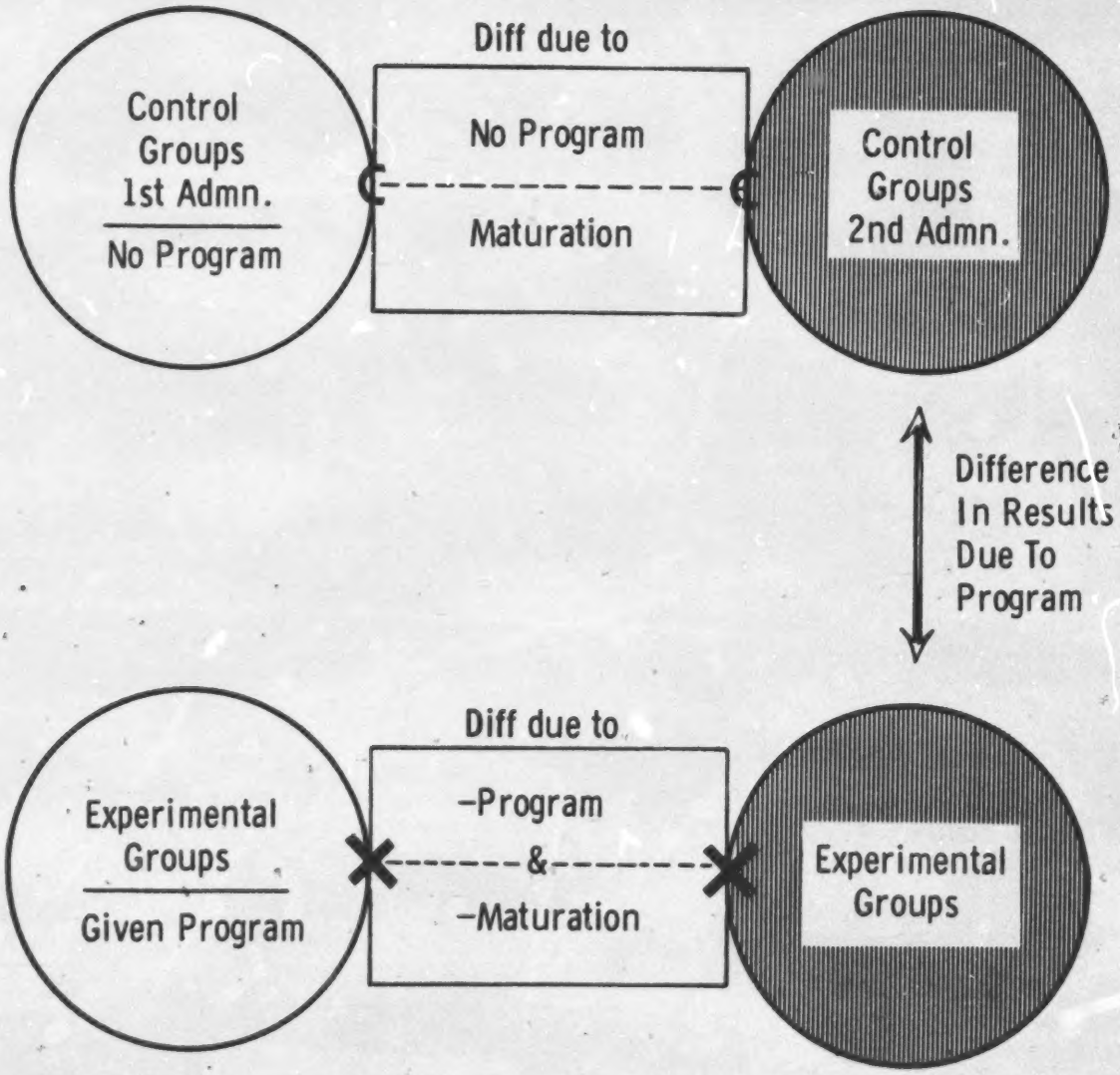
A. METHOD--two kinds of elementary school groups were used:

- Experimental groups--were tested and given the program
- Control groups--were tested, but not given the program
- Matched groups--that were comparable
- An adequate sample--1034 students were involved



RESEARCH DESIGN TO MEASURE PROGRAM EFFECTIVENESS

B. EXPERIMENTAL DESIGN--of the evaluation



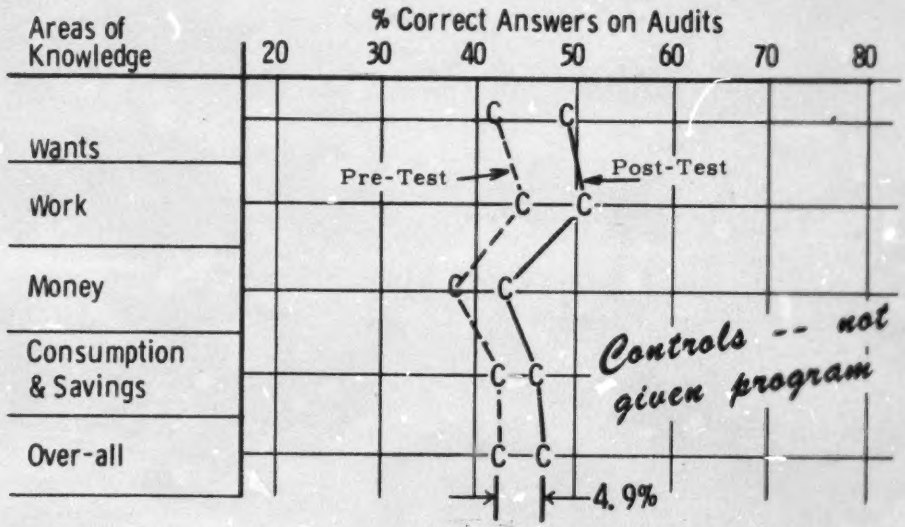
ACQUISITION OF ECONOMIC UNDERSTANDING
Grade 4

EVALUATION SHOWS - -

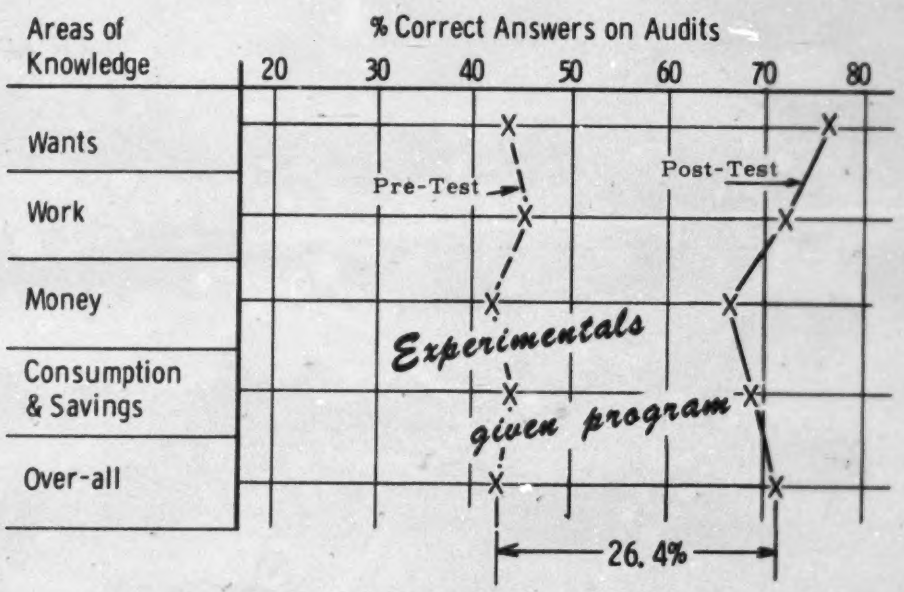
Controls - showed only 4.9% improvement from regular social study course and normal maturation.

Experimentals - showed 26.4% improvement from program or 5.4 times as great as controls.

CONTROL GROUPS -- (N = 172)



EXPERIMENTAL GROUPS -- (N = 1077)



Acquisition of Economic Understanding

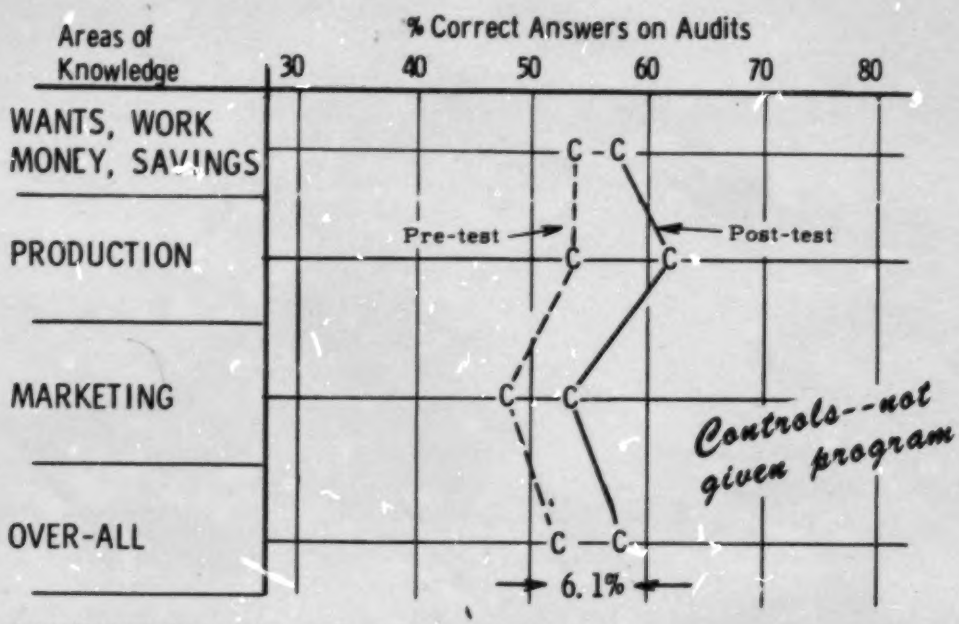
ACQUISITION OF ECONOMIC UNDERSTANDING
Grade 5

EVALUATION SHOWS - -

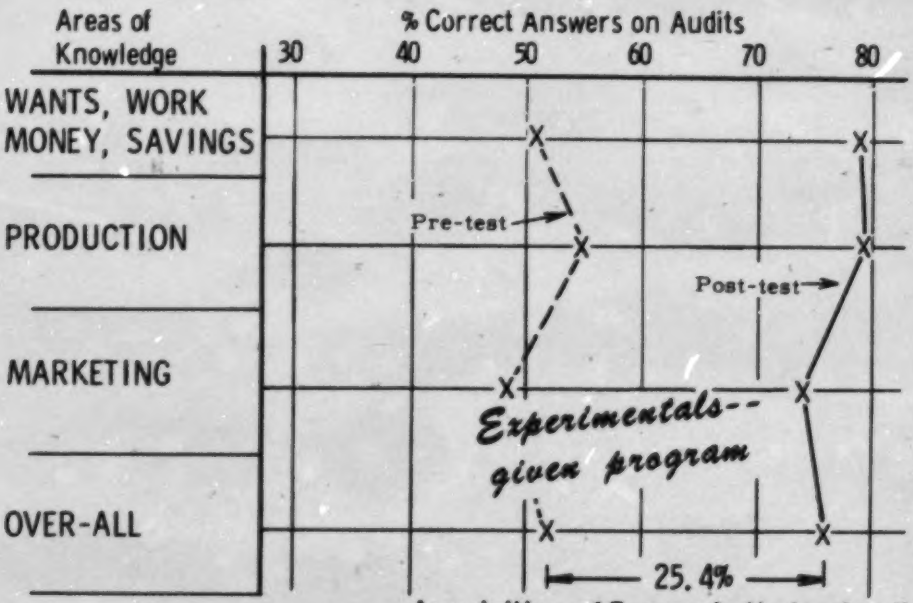
Controls - showed only 6.1% improvement from regular social study course and normal maturation.

Experimentals - showed 25.4% improvement from program or 4.2 times as great as controls.

CONTROL GROUPS -- (N = 268)



EXPERIMENTAL GROUPS -- (N = 1067)

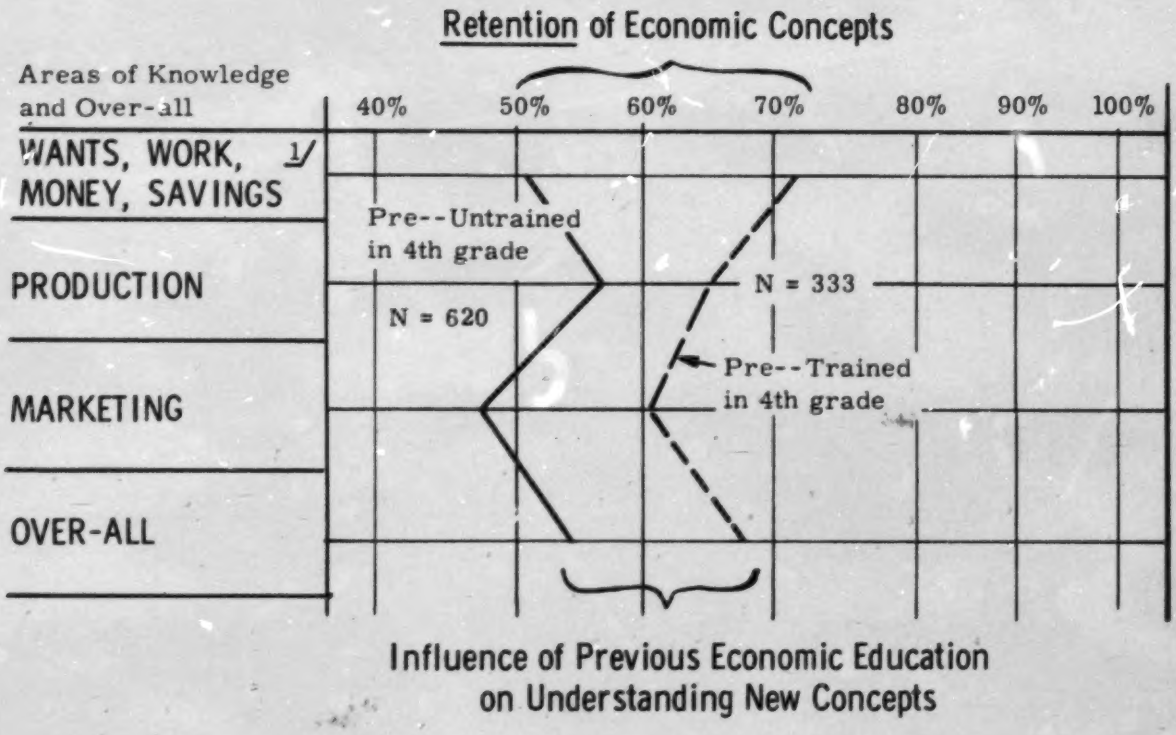


Acquisition of Economic Understanding

RETENTION OF ECONOMIC CONCEPTS & UNDERSTANDING

Grade 5

Evaluation shows:



1/ Content of the 4th grade program.

TEACHER EVALUATION*--OF PROGRAM MATERIALS

Grades 4 & 5

TYPE OF MATERIAL	EFFECTIVENESS				
	POOR	FAIR	AVERAGE	GOOD	VERY GOOD
Teacher's Guide			2	12	33
Wall Charts			9	19	16
Students' Readings			5	14	25
Project Book		2	1	11	33
Pre- & Post-Tests		1	4	22	20
Progress Checks		4	6	17	17
TOTAL = 273	0	7	27	95	144
PERCENT	0%	2%	10%	35%	53%
PROGRAM AS WHOLE			3	13	29
PERCENT			7%	29%	64%

*Based on the responses from 47 teachers.

EVALUATION OF STUDENT INTEREST IN ECONOMICS PROGRAM
As Assessed by Teachers

ECONOMICS I vs. OTHER SOCIAL STUDIES

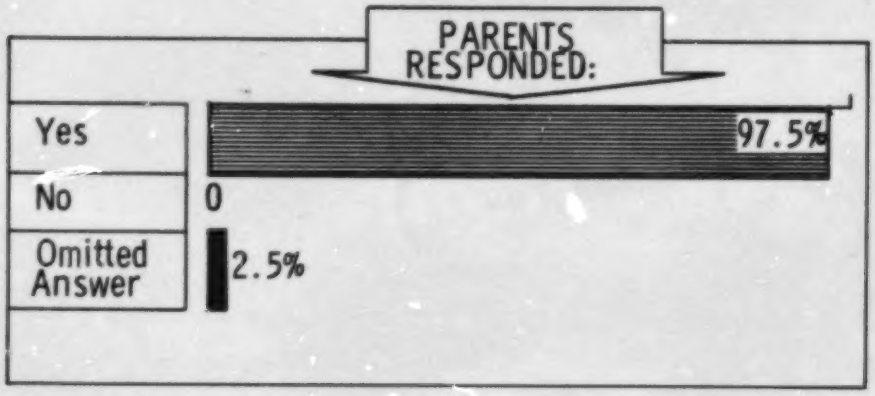
Areas of Knowledge	Much Less	Less	About the Same	More	Much More
Wants			5	7	1
Work		1	9	1	2
Money		1	1	5	6
Consumption & Savings			7	4	1
T[illegible] = 51	0	2	22	17	10
% of Ratings at each Scale Value	0%	4%	43%	33%	20%

ECONOMICS II vs. OTHER SOCIAL STUDIES

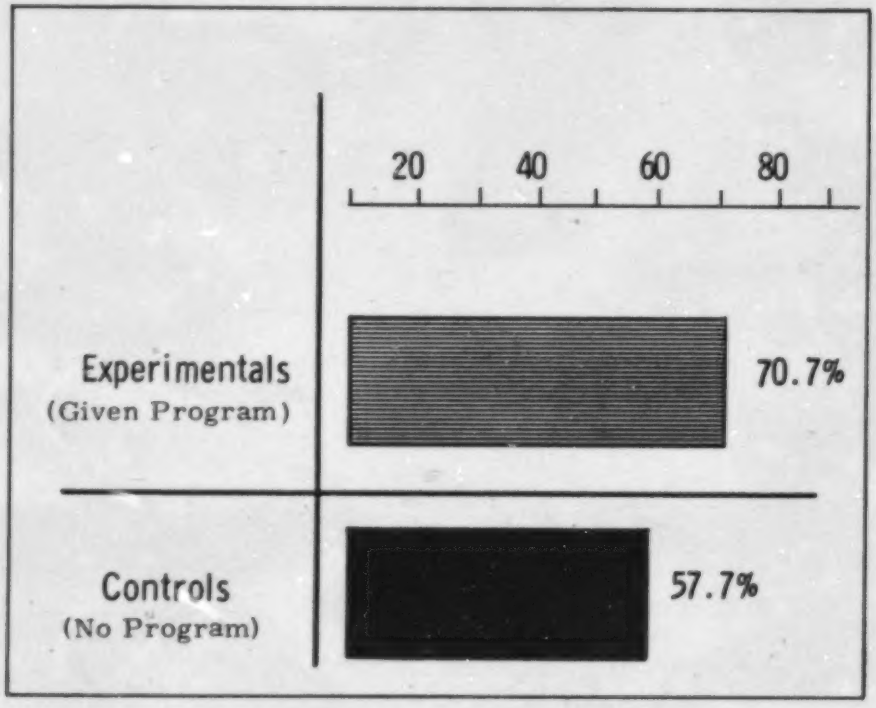
Production		2	12	13	7
Marketing		4	10	16	4
Total = 68	0	6	22	29	11
% of Ratings at each Scale Value	0%	9%	32%	43%	16%

PARENT EVALUATION--OF THE PROGRAM

A. WHAT THE CHILD LEARNS--parent of experimental groups were asked: "Do you think it will help a child to learn about wants, work, production, consumption, natural resources, etc.?"



B. DISCUSSION OF ECONOMIC TOPICS AT HOME



TYPICAL PARENT COMMENTS

"It is very important that these young people be given this basic start in economics."

•

"Seemed to enjoy this class. Was always eager to show the work her class had completed."

•

"I think it's very important for children to learn about our country's economy because in a few years they will be taking our place in society."

•

"Our son certainly learned a lot from this course and loved it. I think all children should have it."

•

"May daughter has brought home her studies on economics and seemed to enjoy it. She has discussed it with me and asked various questions. I even enjoyed it!"

•

"We were very pleased that our daughter had the opportunity to study this course. She was very interested and often brought her book home for us to look at. Her knowledge certainly increased."